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ABSTRACT

Despite the increasing popularity of cooperative learning techniques in elementary instruction, many educators believe that children do not possess effective group interaction skills and advocate that children be taught the group communication skills necessary for group interaction as a separate instructional component. Unfortunately, communication researchers have provided little leadership in this area. A pilot study examined the impact of two instructional modes on children's ability to use effective group interaction skills. All children in a fourth-fifth grade classroom participated in one of six groups that were exposed to three different experimental conditions (lecture and video about group communication processes, lecture only, or no instruction). The task for each group was to pick a period of history, plan a presentation for the class, and plan a 2-page written report. Results indicated that (1) students appeared to like and appreciate the instruction about group communication processes; (2) children could identify communication processes associated with their group task; (3) children appeared eager for this type of instruction and appeared able to implement it in their group interactions; (4) instruction on group interaction must include effective monitoring; and (5) while instruction in group communication skills is needed for children, in-service instruction about group communication is also needed for elementary instructors. Findings suggest that children do have the capability of using interaction skills that promote effective group interaction. (Contains 25 references and 3 tables of data. An appendix lists the instructional elements of the lecture.) (RS)

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Exploratory Study of Children's Task Groups:

Instructional Implications

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Abstract: Despite the increasing popularity of cooperative learning techniques in elementary instruction, many educators believe that children do not possess effective group interaction skills and advocate that children be taught the group communication skills necessary for group interaction as a separate instructional component. Unfortunately, communication researchers have provided little leadership in this area. This paper presents a pilot study that examines the impact of two instructional modes on children's ability to use effective group interaction skills.

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Exploratory Study of Children's Task Groups:

Instructional Implications

Teaching children group interaction skills? Is this necessary? After all, children are in groups at school as they play and learn, and in groups at home in activities with family and playmates. To the casual observer, teaching children group interaction skills may seem redundant given the many group activities children experience. However, a close examination of those group activities demonstrates that children are frequently "grouped," but not communicating as group members whose objectives are dependent upon the interdependent interaction of group participants (Keyton, in press).

This paper will argue that children do indeed need to be taught how to communicate in groups where the objective is to solve problems and make decisions. Adding this type of learning component to the school environment may be the most effective mechanism for teaching children group interaction skills now that cooperative learning groups have become standard instructional practice. Unfortunately, most school environments are not currently structured to provide effective group interaction role models. Dyadic interactions between teachers and students do not reflect the complexity of multiple group member interaction. To illustrate concepts outside the classroom context, teachers often rely upon audio-visual materials; however, group interaction is seldom effectively emulated in videos, television programs, or written material. As a result, students are offered greater opportunities to learn individual and dyadic interaction skills with the expectation that these skills can be transported to the group context. Group instructional difficulties are exacerbated as children are frequently dependent upon their teachers for directing discussions. Riesenmy, Mitchell, Hudgins, and Ebel (1991) reported that children in their study of group interaction exhibited teacher-dependent behaviors of raising their hands to seek permission to talk, addressing questions to the teacher rather than other group members, and watching the teacher to assess acceptance/rejection. To substantiate our argument that children do need instruction in group communication skills, this paper will begin with of a review of the instructional and cooperative learning literature and then present a pilot study conducted to test group interaction instructional methods.

Educators Talk About Group Learning

Pritchard (1993) argues in an editorial that while reasons for children working in groups may be educational, social or economic ones, the advantages to children learning in groups outweigh any disadvantages. He explains that educationally, groups discussions are an effective way for children to understand what is being accomplished. Children's questioning, explaining, describing, and listening to one another helps them learn. From a social standpoint, he argues that it is important that children learn how to work in groups. Limited resources are a frequent economic parameter within educational settings forcing teachers to group children together.

Many elementary teachers have adopted cooperative learning to meet educational, social and economic goals. Cooperative learning, a relatively new phenomenon, is explored in detail by Sapon-Shevin and Schniedewind (1992) and Slavin (1991) who provide excellent reviews of the several philosophies and many issues of cooperative learning. These issues are similar to those considered by researchers who investigate group processes or outcomes and by those who facilitate or lead groups. Noddings (1989) summarizes these issues as: 1) defining the purpose of the group, 2) considering the composition of the group, 3) deciding what curriculum or activities are suited for small group study, 4) formulating appropriate evaluation and reward structures, and 5) determining the appropriate level of teacher involvement. Underlying each of these issues is the philosophical orientation of the teacher. Whether one selects a motivational, social, or cognitive orientation toward small group work, most elementary children are placed in groups to learn. Much of that learning requires discussion for the activity to be instructional. As such, Lee (1993) describes cooperative learning as "instructional methods of structuring classroom environments that facilitate positive interdependence and collaborative efforts among students. The students work together in small groups. their efforts are directed toward mutual, yet academically and socially beneficial, goals" (p. 550).

Given the popularity and promise of cooperative learning, it would seem logical that educators have concentrated on how group interaction serves to further children's learning. Dick (1991) described several meta-analyses that confirmed the positive correlation between cooperative learning methods and

student achievement. This research priority, however, has been at the exclusion of examining the process of children's group discussion. Several educators have called for a change. One argues:

> We have to teach children the skills of working thoughtfully and responsibly together. We have to provide the experiences pupils need to gain practice in the development of those skills. Without such experience, without such practice, pupils will not be able to perform in new ways. Most teachers already know this, and they act on that knowledge in such skills areas as teaching children to read and write and number. But we mostly forget that the same is true for learning interpersonal and group process skills. (Wasserman, 1989, p. 203)

One of the most complete rationales and applications of group interaction in elementary educational settings is provided by Cohen (1994). Besides the problems provided by inappropriate task assignments, she illustrates many of the interaction difficulties children encounter. Status issues that can inhibit adult group interaction appear in children's groups in the form of expert, academic, peer, and societal status. Because "learning emerges from a chance to talk, interact, and contribute to the group discussion" (Cohen, 1994, p. 36), instructing children to deal effectively with status differentials is a crucial element to effective cooperative learning. Cooperative group problem-solving requires the ability to listen, ask questions, and explain why or how.

> If the group is asked to come to a consensus, then students will have to learn how to pull ideas together and to find out if the group is ready to decide what to do. Young people are typically unaware that coming to a collective decision involves some procedural discussion about how and when the group will narrow down to a decision. This is evidently learned in formal club and committee settings; even high school students do not engage in as much procedural talk as adults. (Cohen, 1994, p. 46)

Educational Research on Group Interaction

Using 4th, 5th, and 6th graders, Battistich, Solomon, and Delucchi (1993) examined the interaction quality within cooperative learning groups by studying the friendliness, helpfulness, collaborative nature, and the concern shown for others. Groups whose members demonstrated these four

traits were judged as "high-quality" group experiences and were associated with more positive classroom environment while "low-quality" group interactions were associated with negative student outcomes.

King (1993) studied the differential effects of small group cooperative learning on high and low achievers. He found that when in groups with high achievers, low achievers were active, but high achievers still assumed dominant roles in group tasks and group decision making. He concluded that low achievers were generally passive and suggested that "one way to improve the effectiveness of small groups is to carefully prepare students to work and learn in small groups" (p. 414).

Using a coding scheme based upon Bales' Interaction Process Analysis, Lee (1993) examined the effect of gender composition on interaction in cooperative learning groups as students worked on a computer simulation task. Lee found that students interacted frequently within these groups and that their interactions were task-oriented, collaborative, and positive indicating that the students "were not only attentive to the shared group activity of the computer task but also actively engaged in the problem-solving processes related to the substantive content of the task" (p. 569). Also concerned with gender composition effects, McCaslin, Tuck, Wiard, Brown, LaPage, and Pyle (1994) found that student self-reports were more likely to emphasize the absence of negative affects more than the presence of positive affects. Analyzing the correlation of achievement to affect, these researchers reported that students' "interpersonal experiences in small-group learning do not necessarily affect their achievement . . . . Thus, teachers may find it useful to consider the quality of student interaction in small groups as a valid instructional goal for small-group contexts, independent of subject-matter achievement" (p. 479).

Communication Research on Children's Group Interaction

While there has been limited research on children's interaction development (e.g., see Burleson, 1986; Furman, 1984), even less research exists on children's group interaction. Wood's (1981) book-length treatment is typical of these efforts. While the group interaction of children is noted particularly with playmates and within the family, focus is drawn to individual skill development or language acquisition, not interactive group skill development. Even the SCA Speaking and Listening Competencies (Speech Communication Association, 1994) identify group context in only 8 of the 108 examples.

Socha and Socha (1994) recently surveyed families with children in Grades K-3 about their children's' outside-of-school group activities and studied task groups of first grade children. In the survey of outside-of-school activities, Socha and Socha found that many younger children do not belong to task groups outside of school while older children participated in activities which emphasized individual skill development. However, of those families reporting children in group task activities, children reported liking working in these groups. In their examination of classroom task group interaction, Socha and Socha found that children liked being in group discussions where they were responsible for making decisions. Their excitement "even carried over to their request to 'do groups' for other classroom activities" (Socha & Socha, 1994, p. 243).

In analyzing the children's task group interaction, Socha and Socha (1994) found that children could engage in such discussion but that they needed to be reminded of interaction policies and norms to decrease the chaos. These researchers concluded that the interaction of these first grade children paralleled some of the same interaction problems found in adult groups. However, as compared to adult group interactions, the discussions of the children could be not be considered effective. Although their five groups completed their tasks, critical thinking skills were minimal, leadership emergence was not fully sustained by all groups, conflicts occurred, and status differentials appeared to decrease group interaction effectiveness.

Summary

Both the educational and communication literature imply that children need basic group interaction skills. Children cannot be expected to be experts in group management as they deal with complex cognitive tasks in group settings at school (Jongsma, 1991). Keyton (in press) suggested that decision making/problem solving, conflict management, leadership, and rapport building skills are important building blocks for successful group interaction. However, it is likely that these behavioral skills are too abstract for elementary school children. Since children have few or no effective group role models, we argue that teaching primary interactive skills should be the first step to achieving effective group interaction in children's groups.

For this pilot study of children's learning groups, we focused on decision making/problem solving as the central instructional element. We believe it to be the primary skill as cooperative learning places children in groups to increase individual learning as the group produces some outcome. Group outcomes require group decisions. While conflict management, leadership, and rapport building are also necessary, decision making/problem solving can occur in their absence or their presence. Within our decision making/problem solving focus, we identified seven observable elements that facilitate effective decision making/problem solving. These are: relative equal talking time, listening, reflection, on-topic conversation, presentation of new ideas, asking others to contribute or to clarify, and frequency of discussion topic changes. Cohen and Benton (1988) also support these aspects of group interaction as aids to student learning.

Research Question and Hypotheses

As we continued to explore the educational and communication literature, we found few studies concerned with communication processes in children's groups. We were also hesitant to extrapolate from studies of adult group interactions. Children's interaction may differ from adult task interaction; thus, interaction coding schemes developed from and for adult group interaction may not be valid representations of children's interaction. In the two studies that examined interaction in children's learning groups (Lee, 1993; Socha & Socha, 1994), both used a revised form of Bales' IPA coding system. However, neither presented evidence that this coding system was contextually valid. Alternately, we chose our focus as presenting instruction about group interaction and then evaluating subsequent interaction for evidence of that learning. We wanted to achieve several objectives. First, we wanted to explore the practicality of conducting research on cooperative learning groups. Second, we wanted to pilot test different instructional methodologies. There are very few reports on instructional effectiveness. A literature search found no articles addressing instructional effectiveness for teaching process content at the elementary age level. Baus (1995) did evaluate the effectiveness of lecture, role plays, and videotaped roleplays in increasing the retention rate of issues of relational communication. Unfortunately, no relationship was found between modes of instruction and retention of information. He suggested that benefits may accrue only overtime. Earlier, Beentjes and van der Voort (1993) found no immediate

differences after subjecting 4th and 6th grade children to televised and print modes of presentation. Rather, differences in retention became evident at a two-week post training evaluation. While each of these studies examined retention of content, our objective is to increase the behavioral repertoire of children.

Third, we wanted to investigate students' reactions to structured learning about group interaction. Admittedly, one limitation of our study was the short time frame in which the instruction, task and evaluation (one hour) had to take place. An additional limitation is the number of the groups available for our observation. However, the opportunity to explore our research interest and achieve our objectives outweighed the disadvantages inherent in this particular research design. Thus, the research question which provided a foundation for this study was: Can children immediately adopt communicative principles into their group interactions? Using three instructional conditions, we hypothesized that students who both heard and saw the communication principles demonstrated (lecture and video) were more likely to adopt the communication practices than children who only heard (lecture) about the communication principles. A second hypothesis was that children in both of these instructional modes would be more likely to adopt the communication practices presented than children who received no instruction prior to the group task. To answer these questions, we used both observations of video-taped interaction as well as students' self-reported data about their group experience.

Methods

Procedures

The authors obtained permission for the study from the principal and teacher of a 4th-5th grade classroom at a university elementary school. Additionally, permission was secured from parents/guardians of each child to participate in a study about how children learn in groups. The authors visited the classroom to introduce themselves and briefly explain to the children that they would be randomly selected to participate in one of six groups. The authors further explained that each group would be given the same task, and that the task would begin in a session facilitated by the authors and completed later and presented to the class for a grade. The children asked questions and the authors responded without identifying the subject of the task. The children and the teacher appeared interested

and enthusiastic; this classroom used many cooperative learning groups. The unique attention drawn to this classroom of students appealed to them.

Using a roster of the students, six groups were formed for the quasi-experimental conditions with an attempt to balance grade and sex in each group. Since the group sessions were conducted on six separate days, absences created adjustments to the random assignment. Group size ranged from three to five members. All children in the classroom participated in one of the six groups.

The group sessions were held over six consecutive school days. The sessions were conducted in the hall, as common with other curricular and extra-curricular activities. This was a busy elementary school with children moving frequently from classrooms to other areas of the school. While the additional noise and activity was not ideal for experimental and recording conditions, the children appeared comfortable with the arrangement and not disturbed by the distractions. Riesenmy, Mitchell, Hudgins, and Ebel (1991) indicated that many elementary schools are active and noisy, and that external validity concerns would favor research in such environments over laboratory-like environments.

Children selected to participate in the day's session were called from class and asked to bring their chairs into the hall. One of the authors then facilitated the session while the other author monitored the recording equipment. The researchers' roles remained stable throughout the six sessions.

Two groups were slated for each of the three experimental conditions. In condition one (lecture, video), children heard a short five minute participative lecture on seven key elements about group decision making and problem solving interaction. The students then watched a video which displayed a three-person group demonstrating the skills described in the lecture. A short lecture followed the video. In condition two (lecture), the children heard only the lecture presented by the researcher. In condition three (no instruction), the children immediately began the group activity after task instructions from the researcher. The groups in condition three (no instruction) were given the interaction lecture after they completed their task.

Children were then given the group task--to pick a period of history, plan a presentation for class, and plan a two-page written report to be handed in to the instructor. The children were told that they were to accomplish the planning of the presentation and the report in this session and were given as much time

as they wanted to complete this phase of the task. The six groups averaged 15 minutes for the planning task; minimum time was 7 minutes and maximum time was 20 minutes. After the groups signaled to the researcher that they were finished, the children were then asked to fill out a questionnaire about their experience and given a sticker for their participation. The questionnaire became part of the data for this study as did the transcripts and audio/video recordings of the groups' interactions. Finally, the researcher reviewed the main points from the lecture with them, and told them they would be given additional class time to work on the assignment.

Stimuli

The interactive lecture was developed from material presented by Cohen (1994), Epstein (1972), and Morris (1977). The lecture material was enhanced by two posters which summarized the main points of the lecture (see Appendix 1). The focus of this pilot project was to test the ability of children to use group communication concepts presented in the lecture and video in their own group interaction. Parallel to the information presented on the posters, the following variables were operationalized.

Everyone contribute. Frequency of individual talking turns.

Listen. Proportion of group interaction time in which one group member is talking while others are quiet.

Reflect. Frequency of use of previously presented information in subsequent discussion.

Get to the point. Frequency of on-topic conversation.

Give ideas. Frequency of presentation of new information or ideas.

Ask others. Frequency of asking others to contribute or asking others to clarify.

Discuss. Frequency of group members talk turns by topic/idea.

The video was a role enactment by the researchers and one other person planning for a task like the one given the children. The five-minute video was shot in three segments allowing the video to be stopped and the content of the video discussed with the children. The video was intended to be a model for the children to follow and was analyzed in the same manner as the observations of the children's videotaped interaction. In the model tape, the three group members demonstrated equal talking turns (32.61%, 36.96%, 30.43%) and always demonstrated listening to one another. The model tape

demonstrated reflection in 41.30% of the interaction; off-topic conversation was minimal (6.52%). The three-person group changed discussion topics 5 times, each time introducing a new topic. The model videotape demonstrated giving ideas in 19.57% of the interaction and asking others in 23.91% of the interaction.

Results

Several elements of data were collected. First, the audio/video recordings and their accompanying transcripts served as objective data. The written responses to the questionnaires provided data from the students' point of view. The transcript data was not very useful in that the children talked frequently over one another making clear transcribing difficult and true content or conversational analysis impossible.

Observations of the Videotaped Interaction

Visual observation of the videos provided more useful representation of the children's' group communication behavior. As expected each group took on different interaction characteristics. Group 1 (Lecture) was very task oriented which is confirmed by their few off-topic comments. This group was dominated by a 5th grade student who monopolized the discussion. The other three students appeared at ease with her control and facilitation of the group's interaction. Group 2 (No Instruction) appeared to focus on completing the task rather than planning for their task which was their assignment. Group cohesion was nonexistent as members argued over the task, time limits, and individual responsibilities. One member was excluded entirely from discussion until it was his turn to write a segment of the report. Group 3 (Lecture) accomplished the task yet took some time to decide on a subject. The 4th grader appeared to be left out as the 5th graders chided her about not knowing what they knew. Interestingly, upon deciding on a subject, the 4th grader then became dominant as she told another group member what his tasks would be. Group 4 (No Instruction) accomplished their task despite their clowning around. They quickly decided on a topic and fairly distributed tasks for each member. One member of this group was content on letting others discuss and inform him of his responsibilities. The videotape of Group 5 (Lecture, Video) was lost due to technical error. Group 6 (Lecture, Video) had the hardest time staying focused on their task responsibilities. This is due in part to the larger number of children in the group. The emergent

leader was also an initiator of off-topic conversation. The group quickly reached a decision on a topic, yet took a great deal of time negotiating individual responsibilities. In summary, each group did complete their task of planning for a class presentation and a written report to the teacher. While reaching their appointed group outcome, the process by which the outcomes were reached varied significantly.

Using a more objective observation based up operationalizations before viewing the videos, one researcher then viewed the tapes for occurrences of specific behaviors of interest to this study. The authors recognize that these are initial analyses; deeper probes are needed to more specifically clarify children's task group communication. For example, these analyses focus on frequency of communication behaviors with minor attention to quality of communication or subsequent group outcomes. Unfortunately, one of the video recordings was lost due to technical error.

Multiple variables were evaluated through observation of the videotapes. Variables analyzed were: talking turns, total talking time for the group, distribution of talking turns, observable listening behavior, reflection or the overt display of reflecting the comments of others back to the group, talking turns which were off topic, introducing new ideas, overt attempts to include other group members in the discussion, and number of discussion topics and the number of changes within these topics. These results are shown in Table 1.

Talking turn frequencies did not appear unusual. The groups did not have pre-appointed leaders. Rather, the research design allowed leaders to emerge as a result of their task discussion. Leaders emerged in groups 1, 4 and 6; in each group, the emergent leader exhibited more talking turns than other group members. Groups 2 and 3 shared leadership responsibilities among their members. Frequency of listening behavior was moderate to high; however, it was very clear when children were not listening. Clowning or distancing behavior demonstrated egocentric attitudes or isolation preferences of children. Frequencies of interaction reflection were moderate (29.62-63.16%) and on-topic comments were high (88.16%-95.45%). It is unlikely that the group member interaction would result in these frequencies of reflection and topicality if the discussion groups were held simultaneously in the classroom environment where additional distractions would appear and where one group would not be singled out for attention. The children's ability to give ideas was relatively low (2.78%-17.81%). This could be interpreted in two

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ways. One, an initially presented idea was deemed worthy and group members anchored to that idea. Or, two, children did not feel comfortable in presenting ideas to the group. Likewise, including others was also low (10.96%-25.45%), indicating that the children's ability to pull information from others is ineffective or missing in their interaction repertoires.

Using the following assumptions, the groups were ranked to develop a comparative ranking among the groups. The first assumption was that group discussion was enhanced by increased talking turns. Greater frequency of listening behavior, reflecting the comments of other group members, giving ideas and including other group members in the discussion, and on-topic conversation was assumed to enhance group discussion. Decreased frequency of changes in discussion topics was assumed to facilitate effective discussion. Using these guiding assumptions, Group 3 achieved the highest ranking, followed by Group 6, Group 1, Group 4 and Group 2. With respect to instructional conditions, the three highest ranking groups participated in one of the instructional conditions (Group 3 was in the Lecture condition, Group 6 was in the Lecture and Video condition and Group 1 was in the Lecture condition). The other groups were in the No Instruction condition.

Students' Self-Report Data

Unsure of how well 4th and 5th grade children could respond to survey-type questionnaires, the researchers chose to provide broad response categories. These data are displayed in Table 2. Students also had an opportunity to respond to open-ended questions concerning what they liked and didn't like about working in a group. Their responses are displayed in Table 3.

Only one group had members who reported that not everyone agreed on the problem to be solved. This group (2) was in the No Instruction condition. Otherwise, the children believed that their group achieved consensus on the problem to be solved. With respect to participation, several students reported that they had few chances to talk while others reported they had some or many chances to talk in their groups. These data do not appear to discriminate according to instructional modes. With respect to listening, most students reported that others listened to the ideas presented in their groups. Only Group 2 in the No Instruction condition reported otherwise. In terms of cooperation, students reported that they got

along with everyone, the one exception was Group 2 in which students reported that they got along with most of the other group members.

The next set of items focused on the task itself. Students reported that the task was very interesting or a little interesting. No student reported that the task was not interesting. Alternately, with respect to difficulty, responses were in the other direction. Students in the Lecture and Video condition and one group in the Lecture condition reported that the task was only a little difficult or not difficult at all. The other group in the Lecture condition and the two groups in the No Instruction condition reported that the task was a little difficult. With respect to understanding the group objective, students reported that they understood or only that they did not understand the task initially. Finally, students were asked if they solved their group's problem. A greater percentage of students in the Lecture and Video condition reported that they completely solved the problem presented than the groups in the other two conditions.

The open-ended items facilitated a wide range of responses. Regardless of instructional mode, children in each of the conditions reported liking various aspects of working together. Interestingly, the majority of the responses dealt with interaction process and not task parameters. Students gave fewer responses to the open-ended question about what they disliked about in working as a group. The majority reported that they disliked nothing. Students in Group 2 (No Instruction) apparently were aware of their interaction problems as three members wrote they disliked having to deal with dysfunctional or noneffective members. Students in Group 3 in the Lecture condition reported a status differential that created an information problem. The 4th grader felt isolated because she was the only 4th grader while the 5th grade members of her group reported that she was not as far along in the task's subject matter. These responses suggest that children are sensitive to status differentials as described by Cohen (1994).

Comparing Observations to Self-Reports

The two methods of data collection allowed comparisons between how the children perceived their performance and external observations of performance. Comparing talking turn frequency to children's response to "How many times did you have a chance to talk in your group?", it becomes apparent that children differ in their desire to talk in a group or in their satisfaction with the frequency of their interactions. For example in Group 6, three students reported they talked a lot, but talking turn

analysis demonstrated that member B dominated the conversation while all other group members talked with about the same frequency (11.84-17.76%). Apparently some of the children who responded that they talked a lot were satisfied with their level of group interaction even though it was considerably lower than the most frequent speaker.

With respect to listening, our rough operationalization of listening resulted in moderate to high percentages of listening behavior (63.16 to 94.55%). However, all group members with the exception of group 2 commented that everyone listened. While the children appeared to be satisfied with other group members' listening behaviors, observations of the videotaped interaction would demonstrate that some children in each of the groups were not listening. In fact, clowning behavior or distancing behavior dominated some group members interactions. It appears that children have a difficult time knowing when others (or perhaps even themselves) are listening.

Discussion

Clearly, the limited scope of this study prohibits making strong statements about the effectiveness of teaching children group interaction skills. However, several conclusions can be drawn which have instructional or research implications. First, students appeared to like and appreciate the instruction about group communication processes. The students who participated in the Lecture and Video condition appeared more interested and asked more questions about the process information. While Group 2 in the No Instruction condition was both observed on the videotape to interact less effectively and reported more negativity in the self-report data, we cannot draw a firm conclusion that it was the lack of instruction that created their interaction process. However, the comparative analysis did demonstrate that groups in the two learning conditions communicated more effectively according to the observations of the videotape.

Second, the self report data clearly demonstrated that children could identify communication processes associated with their group task and more frequently commented that these were the elements they liked about their group task. This suggests that children in this age range may be ready for instruction about group communication processes. There is clearly an irony about group interaction in classroom settings. Schools expect "children to assume adult roles, [and] we might expect them to emphasize cooperative activity. Yet schools are among the institutions in our society least characterized

by cooperative activity" (Slavin, 1981, p. 655). This pilot study confirmed the recommendation of Cohen and Benton (1988), "the first step in introducing groupwork to a classroom is to prepare students for cooperative work situations. It is a great mistake to assume that children (or adults) know how to work with each other in a constructive, collegial fashion" (p. 17). They continue by recommending skill practice and reinforcement, in addition to talking about the construction of new group interaction norms.

Third, group interaction must be a separate instructional component. Children in the 4th and 5th grades appear eager for this type of instruction and appear able to implement it in their own group interactions. While children in these grades are frequently grouped, their groupings are not of the type that sustain group interdependency, group goal, and group reward. As children mature, their group experiences will require understanding of such concepts and cooperative learning groups appear to be an appropriate venue for this learning to be initiated.

Fourth, instruction on group interaction must include effective modeling. The researchers searched instructional videotapes as well as commercial videotapes for such role models and found none. Children will have more difficulty modeling effective group interaction without hearing and seeing it, and these opportunities are not available in other classroom interactions. Videotaped interaction may be the best instructional mode for introducing effective interaction process models to children. Beentjes and van der Voort (1993) found that "while reading the child must construct her or his own images, whereas television presents the visual images, and for that reason, may be a more solid base for making inferences" (p. 201). Seeing carefully constructed videotaped group interaction may be the only effective model to which children are exposed. Beentjes and van der Voort (1993) also claimed that televised stories were better retained than print or verbal stories because televised content does not rely upon reading skill or comprehension. Not only may televised interaction models be the most effective, but they may also even the learning opportunities for children of various academic levels.

Fifth, while instruction in group communication skills is needed for children, in-service instruction about group communication is also needed for elementary instructors. While cooperative learning has been adopted by most educators, maximizing those opportunities will most likely happen when teachers understand and facilitate effective group interaction coupled with group goals and group rewards. Neither

the educational literature nor the communication literature provide leadership in this area. While educational research may call for such instruction, we found little beyond Cohen's (1994) book that instructs teachers on how to facilitate such learning. We believe that in-service instruction about group interaction skills will help teachers overcome any resistance they might feel as they react to yet another concept being introduced into already crowded curriculum. Another way to overcome resistance is to design projects to demonstrate the effects of group interaction instruction on cooperative learning effectiveness.

In responding to our research question, children do have the capability of using interaction skills that promote effective group interaction. However, it is clear that students in the age range need specific communication process instruction and that effective interaction for elementary age students is markedly different than effective group interaction of adults. If we do not take issue with how children learn group communication skills, they will learn by default. And, this process of learning is not effective as evidenced by the many students who enter college classrooms unprepared for effective group participation.

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Table 1

Observations of Videotaped Interaction

Group; Talking Turns; Talking Time	Everyone Contri-butes	Listening	Reflection	On Topic Comments	Giving Ideas	Including Others	Changes in Discussion Topics
Condition One: Lecture and Video							
6 152 turns; 13 minutes	A=15.13% B=38.16% C=17.11% D=17.76% E=11.84%	63.16%	63.16%	88.16%	7.24%	11.42%	5 changes over 3 topics
Condition Two: Lecture							
1 138 turns; 20 minutes	A=42.75% B=22.46% C=22.46% D=19.56%	87.68%	44.93%	94.2%	5.07%	21.01%	15 changes over 4 topics
3 110 turns; 7 minutes	A=37.27% B=27.27% C=26.36%	94.55%	33.63%	95.45%	12.73%	25.45%	5 changes over 4 topics
Condition Three: No Instruction							
2 108 turns; 18 minutes	A=27.78% B=35.19% C=37.04%	93.52%	29.62%	90.74%	2.78%	14.81%	14 changes over 4 topics
4 73 turns; 10 minutes	A=32.88% B=43.84% C=23.29% D=21.92%	80.82%	63.01%	90.41%	17.81%	10.96%	5 changes over 3 topics

#5 in Condition One lost to technical problems

Table 2

Children's Self-Report Data

Item	Group 6 Lecture & Video n=5	Group 5 Lecture & Video n=4	Group 1 Lecture n=4	Group 3 Lecture n=3	Group 2 No Instruction n=3	Group 4 No Instruction n=4
Did everyone in your group agree on the problem to be solved?	Yes=5 No=0	Yes=4 No=0	Yes=4 No=0	Yes=3 No=0	Yes=1 No=2	Yes=4 No=0
How many times did you have a chance to talk in your group?	A lot=3 Some=2 None=0	A lot=2 Some=1 None=1	A lot=3 Some=0 None=1	A lot=0 Some=3 None=0	A lot=2 Some=0 None=1	A lot=2 Some=2 None=0
How many in your group listened to others' ideas?	Everyone=5 1 or 2=0 Nobody=0	Everyone=4 1 or 2=0 Nobody=0	Everyone=4 1 or 2=0 Nobody=0	Everyone=3 1 or 2=0 Nobody=0	Everyone=1 1 or 2=2 Nobody=0	Everyone=4 1 or 2=0 Nobody=0
Did you get along with everyone in your group?	All=5 Most=0 No one=0	All=4 Most=0 No one=0	All=4 Most=0 No one=0	All=3 Most=0 No one=0	All=0 Most=3 No one=0	All=4 Most=0 No one=0
How interesting was this activity?	Very=5 A little=0 Not at all=0	Very=0 A little=4 Not at all=0	Very=4 A little=0 Not at all=0	Very=0 A little=3 Not at all=0	Very=1 A little=2 Not at all=0	Very=4 A little=0 Not at all=0
Was this activity difficult?	Very=0 A little=1 Not at all=4	Very=0 A little=3 Not at all=1	Very=0 A little=2 Not at all=2	Very=0 A little=3 Not at all=0	Very=0 A little=3 Not at all=0	Very=0 A little=4 Not at all=0
Did you understand what it was you were supposed to do?	Yes=5 Not at first=0 Still unsure=0	Yes=2 Not at first=2 Still unsure=0	Yes=3 Not at first=1 Still unsure=0	Yes=3 Not at first=0 Still unsure=0	Yes=2 Not at first=1 Still unsure=0	Yes=3 Not at first=1 Still unsure=0
Did your group solve the problem?	Yes=4 Some=1 Some, but poor=0 No=0	Yes=4 Some=0 Some, but poor=0 No=0	Yes=3 Some=1 Some, but poor=0 No=0	Yes=1 Some=2 Some, but poor=0 No=0	Yes=0 Some=3 Some, but poor=0 No=0	Yes=4 Some=0 Some, but poor=0 No=0

Table 3

Children's Open-Ended Responses

Open-ended Responses	Group 6 Lecture & Video n=5	Group 5 Lecture & Video n=4	Group 1 Lecture n=4	Group 3 Lecture n=3	Group 2 No Instruction n=3	Group 4 No Instruction n=4
What did you like best about working in a group?						
Listening to others		1	1			
Working together	2		1	1		2
The task			1			1
Getting different ideas	1		1			1
Not having to do all the work	1				1	1
Others had same ideas				1		
Liked working with different people				1		
It was fun	2	1				
Liked voting		1				
What did you like least about working in a group?						
Nothing	4	4	4			4
Calming others down	1					
4th grader not as far along as 5th graders				1		
No other 4th graders like me				1		
Have to deal with know-it-alls					1	
Others not liking your ideas					1	
Too many ideas to deal with					1	

Appendix 1

Instructional Elements of Lecture

GLAD Poster

Key phrase: Good discussion makes us GLAD!

G=give ideas

L=listen, look at others when they are talking, ask questions about what people say

A=ask others for clarification

D=discuss what the group should do

Rocket Poster

Key phrase: Watch your discussion take off like a rocket!

Get to the point; be concise

Listen, act interested

Reflect what others say

Everyone contributes, gives their input